Gulf of Mexico Ballast Water Profile

EXECUTIVE SUMMARY

Ship traffic, cargo, and ballast-water data were assembled and synthesized during this study for the Ports of Houston (including the Houston Ship Channel), Lower Mississippi (including Ports of New Orleans, South Louisiana, and Baton Rouge), Gulfport, Mobile, and Tampa. Collectively, a very large volume of cargo is shipped through the United States Gulf Coast. While this study did not quantify the values of the ship cargoes, it is conservative to assume that these five port complexes are major components of the regional and national economies. Furthermore, as shown in the individual port summaries, cargo volumes across the 5-port complexes have either increased or been steady over the last 10 years.

Because ballast water is a function of cargo volume and ship type, the number and types of ships calling on the five port complexes were summarized in this study. For 1996, the largest single category of cargo is bulker cargo in the Ports of Lower Mississippi, followed by tankers in the Port of Houston, and general cargo in the Lower Mississippi.

Calculations were conducted to estimate total 1996 ballast discharged across the five ports and the three ship types. The largest volume of ballast discharged in the Gulf Coast ports is released by bulkers calling on the Ports of Lower Mississippi. The Ports of Lower Mississippi account for 79.3 percent of ballast released in the five study ports in 1996. However, this does not imply that other ballast releases from other ships or ports are inconsequential or of low volume. Significant volumes of ballast are discharged throughout the five ports and across all of the ship types.

In summary, the data evaluated in this study of five Gulf of Mexico ports shows that there are very large volumes of ballast releases occurring, and the vast majority of the releases are happening in the Lower Mississippi. Eleven-year trend data show that the volume of cargo shipped by sea throughout the Gulf is either level or steadily increasing. Current port expansions, and planned expansions, indicate that cargo tonnage, and by correlation ballast releases, are expect to increase yearly.

Based on the summary data in this report, efforts to limit or manage ballast releases should certainly include the bulker traffic in the Ports of Lower Mississippi and considerations should be given to the ecosystem in which ballast waters are released.

The matrix of ballast volumes, sources of ballast water, shipboard transit conditions, and receiving environment conditions make for a complicated situation that is difficult to predict. However, there is general agreement that the large volumes of water arriving in the United States on dedicated international routes keep the “invasion window” open more often and for a longer periods than has occurred in previous history. To date, the subtropical environment of Gulf of Mexico ports is under studied with regard to invasions of nonindigenous species, but all indicators point to inevitable future invasions if current standards of ballast water management continue.

Prepared for the Gulf of Mexico Program by Battelle
under a U.S. Environmental Protection Agency contract (68-C7-0004).